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| 10/733,304 | 12/12/2003 | Hiroyuki Urakami | 041514-5318 | 7325 |
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| EXAMINER | | | | |
| SHERMAN, STEPHEN G | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,304

Applicant(s)

URAKAMI ET AL.

Examiner

STEPHEN G. SHERMAN

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed 1 October 2008. Claims 1-6 are pending.

Response to Arguments

2. Applicant's arguments filed with respect to claims 1-3 have been fully considered but they are not persuasive.

On pages 2-4 of the response the applicant argues that the rejection is based on a "technical misunderstanding" of Honda and then explain that Honda accumulates frequency data every line and not every field as claimed. The examiner respectfully disagrees. As the examiner has explained in previous Office Actions, the examiner is competent enough to understand the differences between the disclosure Honda and the applicant's invention, in that Honda accumulates every line while the applicant's invention only does it every field, however, **THIS DIFFERENCE IS NOT CLAIMED**. This confusion by the applicant is probably due to their misunderstanding of what they are actually claiming. The applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims do NOT state that the brightness frequency data is generated ONLY for each field and further state nothing about a "field-by-field" basis as the applicant has previously

argued, but rather the claims merely state that the brightness frequency data is generated "indicating a number of pixels at each same brightnesses in a brightness distribution for each field of the image signal", and as previously explained by the examiner even if Honda does the generating every line, then it is still done EACH FIELD. For example, the brightness distribution of the first line is a brightness distribution, and this will be done each field for the image signal. **Nowhere** in the claims is there a limitation stating that there is only one brightness distribution for each field or that brightness frequency data is generated only each field or only on a field-by-field basis. The applicant is advised to claim their invention instead of arguing claim limitations that don't exist.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Honda et al. (US 2002/0030672).

Regarding claims 1, Honda et al. disclose a display device including a display panel (Figure 1), wherein each field of an image signal is divided into a plurality of

subfields (Figure 24(a)), the display panel includes a plurality of pixel cells for a plurality of pixels respectively, and gray scale display is performed by based on the selectively causing emission in the pixel cells image signal for each of the subfields (Paragraph [0031]-[0032] explain that pixel cells are provided. Figure 3 and paragraph [0036] explain about all of the possible luminance values and paragraph [0048] explains how the luminance values are associated with subfields.), the display device comprising:

a brightness frequency data circuit for generating frequency data indicating a number of pixels at each same brightnesses in a brightness distribution for each field of the image signal (Figures 1 and 2 and paragraphs [0036]-[0040] and [0042]-[0045] explain that according to pixel data, the 1H line luminance distribution analyzing circuit 3 creates accumulated frequency data and a luminance distribution.);

a controller for adjusting, for each of at least two brightness regions for each field of the image signal, the number of subfields at each brightness within each brightness region, based on the frequency data of the pixels concerned (Figure 4 and paragraphs [0047]-[0048] explain that the drive control circuit 2 sets a driving sequence based on the accumulated frequency data, and that the number of subfields used depends on the patterns shown in Figure 4, where 10 subfields are used if full luminance is needed as shown in the region of pattern A, and 5 subfields are used for patterns B, C and D where the brightness regions are between 0 and 128, 64 and 192, and 128 and 255 respectively, where this subfield determination is done every field of the image signal, which is explained in the first sentence of paragraph [0047 which states "...fetches the accumulated frequency data AC in each display line of one field". This means that

every though the pattern is changed every line, the number of subfields is still changed for each field.); and

a multi-grayscale processing circuit (Figure 17, 33) for error diffusion processing or dither processing on the image signal for each field (Paragraph [0054] explains that error diffusion processing and dither processing is done by multi-gradation processing circuit 33. Since this processing is done on each line of the display in each field, then the processing is two-dimensional and is done each field.).

Regarding claim 2, Honda et al. and Suzuki et al. disclose the display device according to Claim 1.

Honda et al. also disclose wherein the controller increases the number of the subfields used for the brightness region when a number indicated by the brightness frequency data is larger than a predetermined value (Figure 4 shows that when the frequency data indicates that the brightnesses needed exceed the thresholds of the limitations set by patterns B, C and D, that pattern A is used, which requires more subfields than the other patterns as explained by paragraph [0048].).

Regarding claim 3, Honda et al. and Suzuki et al. disclose the display device according to Claim 1.

Honda et al. also disclose wherein the greater a number of the subfields used for the brightness region, the more the controller shortens a period of emission of the pixel cells performed in each subfield (Figure 24 shows that when only 5 subfields are used

as shown in (b) the period for emission is longer for SF5 than in the period for emission for SF5 as shown in (a) where there are 10 subfields.).

Allowable Subject Matter

5. Claims 4-6 are allowed.
6. The following is an examiner's statement of reasons for allowance:

The primary reason for allowance is the recitation of the "brightness frequency data circuit," "logarithmic conversion circuit," "clipping circuit," "cumulative brightness frequency data circuit," and the "delimiter value generation circuit" all working in conjunction with each other to produce the values which allow for the driving of the pixels, the structure not found singularly or in combination in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN G. SHERMAN whose telephone number is (571)272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen G Sherman/
Examiner, Art Unit 2629

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629

2 December 2008